THE PORTFOLIO
An Insight to Creative Computing Projects

SCI//CC #03-2019
ALL PROJECTS ARE A PRODUCT OF UTB
AUGMENTED & VIRTUAL REALITY

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- SKELETON & HEART: Augmented Reality
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- BAD DRIVER BEHAVIOUR: 'IMPATIENT': Interactive VR Film
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- BAD DRIVER BEHAVIOUR:
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Started in 2017 by the first intake graduates of Creative Computing Programme Area, The Portfolio: An Insight to Creative Computing Projects is a yearly publication to showcase students’ final year project. It is now my greatest honour to continue this annual creative magazine and welcome you to the third issue created by the graduates of the third intake of Creative Computing Programme Area under the School of Computing & Informatics (SCI), Universiti Teknologi Brunei (UTB).

The purpose of this creative magazine is to exhibit students’ knowledge, skills, and projects as an opportunity to potentially attract future employers. With the rise of creative industries that use digital platforms, graduates can contribute to the country’s economy and culture. On the contrary, this magazine can boost students’ professionalism which makes a good head start in the uprising competitive employment in Brunei. This is in line with the newly establish Digital Economy Council that guides the nation’s ICT policy towards reaching “Smart Nation” status.

Nadirah Rafidi
Nadirah Binti Md Rafidi
Bachelor of Science (Hons) in Creative Multimedia
Creative Computing
School of Computing & Informatics
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Under the School of Computing & Informatics (SCI), Creative Computing Programme Area consists of two creative courses: Bachelor of Science (Hons) in Creative Multimedia and Bachelor of Science (Hons) in Digital Media, that was introduced in 2013 and attained accreditation from the British Computer Society (BCS), the Chartered Institute for Information Technology, early of 2018. With the ever-changing and dynamic demands of creative industries, the two courses are equipped with necessary knowledge and skills that can help the students to develop a research attitude with newly developed technologies. This year, Universiti of Teknologi Brunei has successfully acquired the ISO 9001:2015 Quality Management System Certification after completing a two-stage mandatory certification audit by Bureau Veritas. UTB is now the first university in the country to receive the certification.
Budiman: A 3D Short Animation Project
Isaamuddin Mahsofidin

Pace: 3D Animation Short Story
McAndrian Edmund
I promise you will succeed if you always keep a positive attitude.

I've learned how to make a 3D cartoon and animation that I have always been amazed of. It's hard work especially when doing all those development process alone, but it was amazingly worth it in the end.
I’ve learned how to make a 3D cartoon and animation that I have always been amazed of. It’s hard work especially when doing all those development process alone, but it was amazingly worth it in the end.

We may not be fond of deadlines but somehow we manage to make our ideas bloom because of it.

My main aim for this project is to deliver a motivational message through a short animation video. Apart from that, I would also like to measure whether the targeted viewers have a positive affect or a negative affect after viewing the animation video by using the PANAS scale. In conclusion for this project, the feedback received from the audience are positive. Throughout the period of doing the final year project, I’ve learnt a fair amount of things regarding on animation and storytelling. Since both of these are not within my main area of competence, there were flaws while doing the project. However, I’m glad that I was able to do it till the end and also I’m grateful with the help and advice I’ve received from my lecturers and friends.
A Journey to the Invisible World: Augmented Reality Interactive Story
Tazkiyyatun Nafsiyyah

Skeleton & Heart: Augmented Reality
Matiin Shaminan

Bad Driver | ‘Impatient’: Interactive VR Film
Qutbul Suhaimi

Bad Driver Behaviour: VR Interactive Film
Su’aidah Metussin

Road Sharing Awareness from Cyclist’s Perspective: VR 360 Technology
Naqib Zulfikri
You will only live once. Every second will be counted and accounted for. One day, the opportunity will come, and it is everyone’s right to take it or miss it. Using time and opportunities well is one step to a better life. Starting with a small thing, is not something trivial, but that’s the beginning of a bigger picture.

At first I imagined, working on Final Year Project was something complicated, difficult, and confusing. After I passed my time to work on FYP for about 4-5 months, my guess was right about FYP. But, there are a billion of lessons that I learned, which I might not get if I missed the FYP moment for this bachelor. Working on FYP, I learned to put ideas into reality, I also learned how to fight my fear and take responsibility for what I had started.
**AUGMENTED & VIRTUAL REALITY**

**AR Skeleton & Heart**, is a Marker-Less Augmented Reality application that runs on mobile devices with help of ARCore. This application is a multimedia product that falls under e-learning category. This will help motivate users to study and enjoy learning Human Skeleton & Heart.

My experience is that I learnt how to build an AR mobile App using Unity and ARCore. This project pushed my limit in coding as well as my 3D design skills. What important in this project is TIME, time management.
Before you give up, think about why you held on so long.

Interactive Virtual Reality (VR) film is one of my initiatives to raise awareness about road traffic accidents in Brunei. Driver behavior such as driver error, inattention, and aggression have been the leading factors of car accidents in Brunei. The aim of my project is to change driver behavior from overconfident into road safety first. I was using VR to investigate the user’s perception on bad driving behavior and the possibility of using this technology as a tool to raise awareness. During the final year project development, there were new knowledge and skills which I've learnt, especially the relationship between VR film development with road safety awareness, communication and time management. I hope my project can be further develop in the future because I believe nothing is a waste of time if we use the experience wisely.
None of my fears can go where I’m headed.

This project aims to take a look at the current state of road safety in the nation and the way that awareness is being brought up to the forefront in regards to the issue. In a nutshell, the notion of the project is to bring audience into a new reality that takes over their actual reality in the moment. The scene will put them in the position of the driver behind the wheels that will go through a series of events which may or may not lead them to a disastrous ending, which all depends on the decisions that the audience is left up to decide. This allows the users to see and place themselves in the situation as the characters in a real environment without causing any real harm.

The most challenging feature to develop is the user’s decision-making part. With limited knowledge about developing application using android studio and unity, it was difficult to get the code for this function right. It took lots of time to develop this feature successfully. I learnt a lot from developing this application such as how to utilize GoogleVR plug-in, shooting a 360 camera and editing the footages and configuring 3D elements into the VR environment and how to make the objects in the environment interactive to allow user’s decision-making.
They called me Kip, but I prefer you to call me yours.

For my Final Year Project, I am developing a Virtual Reality (VR) Interactive film on cycling on the open road. The educational video will help to raise awareness especially that relates to cycling-accident cases. User will be experiencing a real-life simulation as cyclist to enhance their understanding on improving road etiquette. User can also assess different real life situation and this would also help improve their behavioral aspect and create a sense of empathy especially when they are sharing the road with cyclists.
Fruits of Borneo: 2D Educational Game
Hennastysha Latip

Recycling Through Technology: Educational Game
Fadhil Hamdani

Legend of Keris: A 2D RPG Picel Game
Alvyn Augustine

Friends of the World: A Cultural Game
Shafira Shufri

Educational Games for Learning Programming
Amal Hamzah
For my Final Year Project, I am developing a Virtual Reality (VR) Interactive film on cycling on the open road. The educational video will help to raise awareness especially that relates to cycling-accident cases. User will be experiencing a real-life simulation as cyclist to enhance their understanding on improving road etiquette. User can also assess different real life situation and this would also help improve their behavioral aspect and create a sense of empathy especially when they are sharing the road with cyclists.

The moment you are about to give up is the moment you shouldn’t. That’s where the great things are.

I’ve learned that I can do anything if I put my mind into it, and the feeling I get when I’m done with my final year project was a satisfying one because I did it! My own hard work into one project.
Failing does not make you a failure, giving up does.

Patience, Independent, Confidence, Perseverance, Stress relief. Decision making and always having plan b.
Patience, Independent, Confidence, Perseverance, Stress relief.

Decision making and always having plan b.

If your Final Year Project idea doesn’t kill you, the progress will.

Legend of Keris is a 2D role-playing game which I would like to make a comeback and polish. Many functions and assets of the games taught me on how to produce the game. From interacting with certain objects to animating character in a battle makes this game stand out. It’s one step closer to become a game-developer.
It matters not how strait the gate, how charged with punishments the scroll, I am the master of my fate, I am the captain of my soul.

During my Final Year Project, I have learned that you should do the best for yourself and not comparing yourself to others. Bring your project to life with the time you invest into it. Don’t be afraid to ask help from willing hands and hear others’ helpful insights yourself. The most important asset of the FYP project is yourself. Don’t give yourself up. If you believe you have given your best (did all the research and implementation) Insyallah the rest will fall into place.
Whatever things you’re doing, always reflect it to your life. Sometimes the process is just the same but we perceived differently.

Bytes is a click game that teaches C# programming language. This project aims to introduce the basic fundamental programming concept to year 4 until year 6 students which focuses on developing computational thinking, planning and understanding and it hopes that this educational programming game can be one of the learning tools. During the process of project development, I’ve learnt that understanding the basic concepts and how things should work is the important key before we proceed to the development and from here it can help to plan better. Programming is never easy but it’s fun and interesting to learn and with the consistency and commitment, surely the skills and knowledge would gradually grow.
Environmental Awareness using Interactive Projection

Nadhirah Rafidi

Visualising Mood through Heartbeat

Zharif Rahman
My Final Year Project deals with detecting heartbeat via arduino connected to our fingertips to animate a rigged 3D model and allows user to react emotionally to how they feel about the animation shown.
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ENVIRONMENTAL AWARENESS USING INTERACTIVE PROJECTION

I have always been inspired by designers that use their design as a way to bring awareness to their community. This is how I got the motivation to do this project. My objective was to foster a sense of connection between my work and the public. For my project, I focused on plastic pollution and what harm it can bring to the marine environment. I had to go through different researches to support my project.

The process of completing the project was a challenge. From brainstorming to the final presentation, it was quite a learning experience for me as I didn’t get enough sleep. I have learned how to understand my work flow cycle as well as giving myself some space to grow from doing the project.
Investigating Students & Teachers: Perception on using Games for Learning in Brunei

Hisyam Harun

Emotion Analysis

Manilitphone Thephavanh
Nothing is sweeter than proving someone wrong. Through patience, great things are accomplished.

My final year project was a development of a prototype game used for an investigation to learn more about what students and teachers think of using digital games to help boost learning in school. It was tiresome and it taught me that preparation and time management is vital for everything. Also, don’t be afraid to ask for help from anyone.
Questioning doesn’t make you a fool, but cool.

I did a research on Emotion analysis for my final year project. Emotion analysis is useful for many applications dealing with human emotions. The purpose of the analysis is to explore and experiment with various machine learning techniques that can outcome with accuracy results for each technique in a certain condition. By using the Extended Cohn-Kanade Dataset (CK+) with appropriate data mining tool will help to analyze universal of human emotions and result with reasonable accuracy.

This project is very challenging, and I almost gave up from doing it. I’m quite new in this area and everything needs to learn from the start. But my mom always told me “nothing is easy! Just keep going and never give up!”. That’s why today, I AM GRADUATING!

Thank you to my family, my supervisors and my friends that always cheer me up. Also, I would like to thank you to the Brunei government who gave me the precious opportunity to study in Brunei. Khob Jai!